

PROCESS FOR RECOVERY OF DIENE-FREE FEEDSTOCKS FROM OLEFINIC PROCESS STREAMS

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ABSTRACT OF THE INVENTION

Processes using heterogeneous adsorbents are disclosed for purification of olefins such as are typically produced by thermal cracking of suitable hydrocarbon feedstocks. The processes for recovery of diene-free feedstocks includes passing an olefinic process stream containing undesirable levels of propadiene, and optionally hydrocarbon compounds having more than one double bond, small amounts of acetylenic impurities, and/or other organic components, through a particulate bed of heterogeneous adsorbent comprising a metal supported on a high surface area carrier, under conditions suitable for adsorption of dienes. Beneficially, the resulting gaseous mixtures also have reduced levels of other hydrocarbons having more than one double bond, and have reduced levels of acetylenic impurities, such as acetylene and methylacetylene. Processes according to this invention are particularly useful where the olefin being purified is ethylene and/or propylene formed by thermal cracking of hydrocarbon feedstocks from the adsorbent.

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